

STORMS AND WEATHER WARNINGS

WASHINGTON FORECAST DISTRICT

The month was very quiet as far as storm warnings were concerned. Small-craft warnings were issued on the 16th, 22d, 27th, and 31st for portions of the middle and north Atlantic coast and storm warnings on the evening of the 31st from New Haven to Eastport. The month was characterized by a considerable number of Alberta highs.—*R. H. Weightman.*

CHICAGO FORECAST DISTRICT

The weather in this district was rather warm during the first half of July and cool during the second half; and the month, as a whole, averaged below normal in temperature, except in the extreme western portion of the region.

Rainfall, for the most part, was deficient, and decidedly so in some areas, especially from the Valley of the Red River of the North southward across the middle and lower Missouri Valleys. On the other hand, copious rainfall occurred in portions of the lower Michigan peninsula and the middle upper Mississippi Valley. Weather conditions were not such as to call for general warnings, and only minor advices in the nature of small-craft warnings on the Great Lakes and frost warnings for the cranberry marshes of Wisconsin were sent out on a few occasions.

In addition to the regular forecasts, special forecasts were made for the forest interests of western Montana and for the fruit spraying interests of southwestern lower Michigan and Door County, Wis.

The forecaster was called upon on two different occasions to make special predictions which seem worthy of note:

1. For the Chicago-Mackinac Island cruiser race.
2. Flying weather for night flight of six Army airplanes en route from Cheyenne to Chicago.

The cruiser race started from Chicago on the afternoon of Saturday, July 25, there being about 20 entries, sloops, schooners, and yawls; and on the morning of that day a special winds and weather forecast was made covering the course down Lake Michigan for the period ending Monday night, and special forecasts twice daily thereafter until the morning of the 28th. The forecast was for northerly winds following the time of the start, probably becoming fresh, and forecasts for continued head winds were made in the later issues. These were broadcast widely by radio, so that boats equipped with receiving sets might pick them up during the race. In consequence of the continuation of head winds, the boats did not reach Mackinac Island, their destination, until much later than usual, being approximately three days in transit. The predictions were well verified and much appreciated.

The commander of a group of six Army pursuit airplanes, desiring to make a test flight by night from Cheyenne, Wyo., to Chicago, wired the Chicago forecaster July 28 an inquiry as to good weather for night flying. Because of the large number of planes involved and the desirability of keeping in close formation on the journey, excellent weather was necessary, but local thunderstorms and more or less unsettled conditions were prevailing along the route. The commander at Cheyenne was so advised on the 28th and 29th. On the 30th, when conditions seemed to be improving from Cheyenne eastward almost to the Mississippi River, he was informed that comparatively clear conditions would prevail over that area, but that the weather would be mostly overcast

in northern Illinois; and that the wind aloft, from 2,500 to 3,000 meters, would be favorable carrying winds. The trip was made that night, the 30th, and all planes landed safely at the flying field near Chicago, except one, which was forced down because of engine trouble.—*H. J. Cox.*

NEW ORLEANS FORECAST DISTRICT

Moderate weather conditions prevailed over the west Gulf district during July, marked, however, by persistent drought over much of Texas and parts of Oklahoma and Louisiana. No storm warnings were ordered during the month, and no storm occurred on the west Gulf coast.—*I. M. Cline.*

DENVER FORECAST DISTRICT

The usual midsummer conditions prevailed, with frequent showers and thunderstorms in about all portions of the district except western Arizona. Occasional heavy downpours occurred during the last decade of the month in eastern Colorado and New Mexico. Temperatures averaged considerably above normal.

No special warnings, except flood warnings, were required.—*J. M. Sherier.*

SAN FRANCISCO FORECAST DISTRICT

July gave no exceptional weather conditions in this district other than a period of abnormally high temperatures in the interior during the middle of the month, attended by exceptionally high temperatures at many interior reporting stations, and resulting in the recording of higher readings than had been previously registered at a number of points in the Central Valley of California and at some of the stations in Nevada and southern Idaho. The oncoming of the heat wave was indicated by the regular forecasts and by special warnings disseminated when the fire hazard in the forested areas was expected to make fires easy to start and difficult to suppress. These advices now go by telegraph, telephone, or radio-telephone to those interested, and it is reported that they are most helpful.

Precipitation was light and local, as a rule, and attended by thunderstorms in nearly all instances. No cyclonic storms approached this district from the Pacific, although near the end of the month a disturbance of moderate intensity was off the Washington-Oregon coast and there were indications that it would move eastward and cross the coast line near Puget Sound. Instead, it moved northward and did not affect the weather conditions in any region except the Washington coast, where it produced light rains and strong southerly winds.—*E. H. Bowie.*

RIVERS AND FLOODS

By R. E. SPENCER

Low water.—Owing to the continued dryness of the summer, unusually low stages occurred in some of the rivers of the South, and the Mississippi, after a rise from the extreme low water of May and June, began dropping again about the middle of July and was still falling steadily at the end. Low-water records for this month were closely approached in the upper Tombigbee and Red Rivers; and in the Tennessee and lower Arkansas Rivers, where the condition was especially marked, stages fell lower at several stations than in any previous July of record. The following table gives comparative low stages for July on the two latter rivers: